

# MISSOURI CONSERVATIONIST

VOLUME 86, ISSUE 7, JULY 2025  
SERVING NATURE & YOU







# Get Your



# NATURE BOOST



Interested in exploring the outdoors, but unsure where to start? It's as easy as stepping out your door! Join host **Jill Pritchard** from the Missouri Department of Conservation as she explores everything nature has to offer — from health benefits and wildlife viewing to outdoor recreation and unbelievable conservation stories. Subscribe and get your own Nature Boost!

Download the podcast at **[mdc.mo.gov/natureboost](https://mdc.mo.gov/natureboost)**

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## MISSOURI CONSERVATIONIST



### ON THE COVER

Kayakers enjoy a trip on the Current River.

 **DAVID STONNER**  
14–35mm lens, f/22  
1/250 sec, ISO 800

**GOVERNOR**  
Mike Kehoe

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**CIRCULATION**  
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# Inbox



## Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email [Magazine@mdc.mo.gov](mailto:Magazine@mdc.mo.gov) or write to us:

MISSOURI  
CONSERVATIONIST  
PO BOX 180  
JEFFERSON CITY, MO 65102

## A TIMELY VISITOR

The day after I got the May issue, what do I see in my backyard? A grosbeak! I have not seen any visit my suburban yard since I moved here in 1993.

Frieda Clark  
St. Peters

## MORE GROSBEEK

Your magazine provides the general public with incredible stories and information about conservation in Missouri. However, I must express a level of disappointment in your May issue. When I saw the cover of the magazine, I was very anxious to delve inside to read a very interesting article about the rose-breasted grosbeak. Not finding one, I can only hope it may be on your future agenda to educate us about this long-range migratory bird like only your staff can do.

Bob Allen Nixa

*Editors' note: When selecting a cover image for the magazine, we strive to choose a photo that directly relates to one of the three features inside the issue. However, if one of the features does not lend itself to a striking cover image, we may select something seasonal, as was the case with the May issue. With that said, we are always looking for interesting natural history topics to explore and we could add rose-breasted grosbeaks to that list.*

## REDBUD JELLY

We saw the redbud jelly recipe in the April issue [Page 8]. My wife and I had never tried to make jelly, but the recipe was easy. It turned out great. We both like it very much, and we plan to give some jars away as gifts.

Randy Bordner Jackson County



Rose-breasted grosbeak

## NATURE KNIGHTS

The letter by Dorothy Deckard in your May issue prompted memories of the Nature Knights program [Inbox, Page 2]. Our fifth-grade teacher at Stoutland had our class involved. We would listen to the Conservation Department's radio broadcast during class. We all got involved with a variety of projects. I built bird houses and feeders, collected tree branch sections of different trees, and planted short leaf pine seedlings. This program is all I remember from that school year.

Joe Jeter Lebanon

## A TRIFECTA ... AND THEN SOME

I recently had the most incredible day in our wild outdoors. After two years of trying to shoot my first turkey solo, I did it! I camped in my turkey tent the night before and the next morning I experienced the most beautiful hunt. Not only that, I found morels, three arrowheads, a four leaf clover, and caught three species of fish — catfish, crappie, and walleye. I will truly never forget this experience. Thank you for all of the many ways you help ensure people like me have the opportunity to make memories that last a lifetime.

Marcy Maxwell Camden County

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## Conservation Headquarters

573-751-4115  
PO Box 180  
Jefferson City, MO  
65102-0180

## Regional Offices

Southeast/Cape Girardeau: 573-290-5730  
Central/Columbia: 573-815-7900  
Kansas City: 816-622-0900  
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## Have a Question for a Commissioner?

Send a note using our online contact form at [mdc.mo.gov/commissioners](http://mdc.mo.gov/commissioners).

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The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.



### Want to see your photos in the *Missouri Conservationist*?

Submit your photos online via  
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or by emailing [readerphoto@mdc.mo.gov](mailto:readerphoto@mdc.mo.gov)



1

1 | Ringneck  
snake by Kurt  
Kirchmer, via  
Flickr

2 | Kayaking into  
the sunset by  
Savana Wallace,  
via website

3 | Ruby-throated  
hummingbird by  
Steven Haddix  
via Flickr



2



3



### Want another chance to see your photos in the magazine?

➔ In the December issue, we plan to feature even more great reader photos. Use the submission methods above to send us your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.



# Up Front

✳ As the dog days of summer approach, it's a time when so many reconnect with the amazing natural resources of our state, especially our lakes and Ozark streams. I'm reminded that conservation isn't just the work to protect lands, rivers, lakes, streams, fish, forest, and wildlife. It's also about protecting the public trust, something far less visible, but just as critical.

Actions taken by the department, whether it's restoring wetlands, managing wildlife populations, or working with communities to accomplish shared goals, rely on a powerful principle. Missourians we serve must believe in the integrity and transparency of the agency carrying out its mission. This trust isn't given. It must be earned over time through consistency, accountability, and listening. We continue to push our team to be open and more present in communities and responsive to all who call this state home. Whether you are a hunter, angler, hiker, farmer, or city dweller, your voice matters. And trust in your department of conservation is essential.

Our collective work has never been more important, with public trust in government agencies, science, and public officials at an all-time low. Our team is committed to strengthening relationships and implementing collaborative conservation initiatives. As always, please stay engaged, ask questions, offer constructive feedback. Know that your conservation agency is here to not only protect and conserve the fish, forest, and wildlife resources of this state, but to listen, learn, and work with you to carry out the agency's mission.

**JASON SUMNERS, DIRECTOR**

[JASON.SUMNERS@MDC.MO.GOV](mailto:JASON.SUMNERS@MDC.MO.GOV)

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## WILDLIFE MANAGEMENT TECHNOLOGY

# Tracking Wildlife Via Satellite

With GPS collars, biologists collect more data in less time

by Dianne Van Dien

✳ Tracking the movements of wildlife provides vital information for conservation work. In the 20th century, tracking animals by car or on foot with VHF radio transmitters became the norm. More recently, the addition of GPS to traditional radio collars has begun to change that.

Radio tracking means going into the field regularly, using an antenna and receiver to pick up the radio frequencies of transmitters attached to study animals, and “then what you do,” explains MDC Elk Biologist Aaron Hildreth, “is get a [compass] bearing on where the signal’s coming from, then drive or walk somewhere else in fairly quick fashion, pick up that signal again, get another bearing, and then go to a third spot and do the same thing again.” So, one must take three bearings to estimate one location for one animal.

Data gained this way is useful, but the number of locations you get per animal and their accuracy are both limited. With GPS, the collars communicate



MDC staff track the movements of black bears with collars that have both GPS and VHF radio capabilities. GPS allows biologists to monitor the animals remotely, while VHF may be used to find an animal when a death is suspected, allowing them to investigate the cause.

with a satellite system. Biologists can program the collar to record the animal’s location several times a day or more. The data is obtained via website, email, or text message.

“We can change the settings on the collar from the comfort of anywhere in the country that has internet access or cell service,” Hildreth says. The collars can even be set to release and fall off, so the animal doesn’t have to be recaptured at the end of the study.

“You still need to track the animal and get eyes on them for behavioral studies,” says MDC Black Bear/Furbearer Biologist Nate Bowersock, “but movement wise, there’s no longer a need to fly or track from the ground every day, which saves significant personnel time.”

Because of weight, GPS units for small animals have more limitations than those for animals like elk, bears, eagles, and bobcats. But technology is advancing quickly, and devices with these same real-time tracking capabilities may soon be rendered small enough and light enough for the tiniest songbirds or even butterflies

## At a Glance

Scientists use wildlife-tracking data to determine habitat and resource use, migration and dispersal patterns, survival rates, restoration success, and more. The type of tracking device depends on the size, shape, and habits of the animal as well as the current technology available. Before devices are approved for use, they undergo testing to make sure they are safe for the animals. With smaller animals, the weight of the battery is often the limiting factor.



To track otters, a small VHF device needs to be implanted under the skin because otters remove devices attached to the outside of their body.



Radio tags for brown-headed nuthatches need to be so small and light, the tiny batteries last only a month or two.



# In Brief

News and updates from MDC



## PERMIT PRICES

MDC SEEKS  
FEEDBACK  
FROM  
ANGLERS,  
HUNTERS,  
AND  
TRAPPERS

➔ Missouri is home to more than 1 million anglers, 500,000 hunters, and several thousand trappers. MDC issues nearly 2.6 million hunting, fishing, and trapping permits each year. About 43,000 nonresidents hunt deer, 10,000 nonresidents hunt spring turkeys, and 165,000 nonresidents fish in Missouri annually. More than 400,000 Missourians hunt deer or turkey and more than one million fish annually.

To keep pace with continually rising costs of goods and services, MDC is proposing increases for 2026 to some nonresident, resident, and commercial permit prices. Changes include significant increases to nonresident deer and turkey hunting permits to bring MDC nonresident-permit prices into alignment with surrounding states, creating a new nonresident migratory bird permit at a proposed price of \$60, and creating a new nonresident trout permit at a proposed price of \$40.

Additional revenue from permit sales will help MDC maintain and improve its nationally recognized programs and services for hunters, anglers, wildlife watchers, and others. Additional revenue from permit prices will also help MDC with rising costs of maintaining infrastructure at conservation areas, fish hatcheries, intensively managed wetlands, lake and river accesses, and shooting ranges that are many decades old and in need of significant repair or replacement.

MDC receives no funds through fines from citations and no funding from the state's general revenue budget. For more information on MDC revenues and expenses and how those monies are used to help MDC take care of nature, connect people with nature, and maintain public trust, read the *MDC Annual Review* for Fiscal Year 2024 in the January 2025 issue of the *Missouri Conservationist* online at [short.mdc.mo.gov/4yQ](https://short.mdc.mo.gov/4yQ).

The Missouri Conservation Commission gave initial approval to the proposed MDC permit price adjustments at its May 16 open meeting in Jefferson City.

MDC is seeking public comments on the proposed permit price adjustments from July 2 to July 31, 2025. Get more information and submit comments at [short.mdc.mo.gov/4yQ](https://short.mdc.mo.gov/4yQ).

### CELEBRATE SAFELY

As you celebrate this summer, MDC reminds you to be careful with fireworks, campfires, and other sources of fire that could cause a wildfire.

**FIREWORKS:** Don't light fireworks in any areas where the sparks could ignite dry grass, leaves, or other potential fire fuel. Always have an approved fire extinguisher and an available water supply to douse sparks or flames. Wet the area around where fireworks are being discharged. Check with local ordinances and authorities for bans on fireworks and open burning.

**OUTDOOR BURNING:** Don't burn during wrong conditions. Dry grass, high temperatures, low humidity, and wind make fire nearly impossible to control. Check with local fire departments regarding burn bans that may be in place. A person who starts a fire for any reason is responsible for any damage it may cause.

**OFF-ROAD DRIVING:** Wildfires can start when grass or other dry fuels touch catalytic converters. Think twice before driving through a grassy field. Never park over dry grass or piles of leaves that can touch the underside of a vehicle. When driving off road, regularly inspect the undercarriage to ensure that fuel and brake lines are intact and no oil leaks are apparent. Always carry an approved fire extinguisher on vehicles that are used off road. Check for spark arresters on ATV exhausts.

**MAKING A CAMPFIRE:** Clear a generous zone around fire rings. Store unused firewood away from a campfire. Never use gasoline, kerosene, or other flammable liquids to start a fire. Keep campfires small and controllable. Keep fire-extinguishing materials, such as a rake, shovel, and bucket of water, close. Extinguish campfires each night and before leaving camp, even if it's just for a few moments.

**CALL FOR HELP:** Call 911 at the first sign of a fire getting out of control.

**REPORT FOREST ARSON:** Wildfires are sometimes set by vandals. Help stop arson by calling 800-392-1111 and reporting suspicious activities. Callers will remain anonymous, and rewards are possible.

**PRESCRIBED FIRE:** Fire used in the wrong way can create disasters. Used in the right way, fire can help create habitat for wildlife. For more information on using prescribed fire as a land-management tool, visit [short.mdc.mo.gov/Zrf](https://short.mdc.mo.gov/Zrf).

## Ask MDC

### Got a Question for Ask MDC?

Send it to [AskMDC@mdc.mo.gov](mailto:AskMDC@mdc.mo.gov)  
or call 573-522-4115, ext. 3848.

**Q: My wife and I came across this mushroom on the Discovery Trail behind Burr Oak Woods Conservation Nature Center. We were amazed by its beautiful color. What type of fungi is it?**

→ This is probably a cinnabar polypores (*Pycnoporus cinnabarinus*). These tough, fan-shaped fungi are bright red-orange when young and grow duller orange as they age. Relatively uncommon, these mushrooms feed on dead or decaying hardwoods — often oak — and rarely on the wood of conifers. They can grow singly or in groups. They are not edible, but with their bright and cheerful hues, they decorate woodlands in the same way wildflowers do. Like many other saprobic fungi, cinnabar polypores play an important role in breaking down the tough materials wood is made of and returning those nutrients to the soil.

For more information, visit [short.mdc.mo.gov/4C2](https://short.mdc.mo.gov/4C2).

**Q: We were creek walking and found this little guy. We had never seen a bright red one before. Why is he this color?**

→ It looks like you discovered a burrowing crayfish. These crustaceans spend most of



Cinnabar polypores



Burrowing crayfish

their lives deep underground in extensive networks of tunnels and chambers they've created. They occasionally emerge from their burrows to hunt. It is most common to see them wandering about after a significant rain.

Burrowing crayfish are among the most brightly colored crayfish we encounter, featuring vibrant patterns and color variations. This red variation is common among several Missouri species. However, we still don't fully understand why burrowing crayfish, which spend most of



their lives in the dark and mud, are so beautifully hued. To learn more, visit [short.mdc.mo.gov/4Cu](https://short.mdc.mo.gov/4Cu).

**Q: Last July we saw this deer with a black tail in our pasture, north of Kearney. What kind of deer is it?**

➔ This is a white-tailed deer (*Odocoileus virginianus*), Missouri's most common species of cervid.

This one pictured does have more dark hair on the upper side of its tail than is typical. However, it's relatively common for mammals to exhibit some color variation due to genetic variability. Within the same species, some animals can be unusually dark (melanistic) or piebald (leucistic) or even all white (albino).

The tail is a part of a deer's body that often shows the most variation in hair color. And because this variation in hair color has a genetic basis, it can be common to see more than one individual exhibiting this color pattern in an area.



The white-tailed deer is aptly named because the white undersurface of its flaglike tail is highly visible as it flees danger with its tail held high.

For more information, visit [short.mdc.mo.gov/4Cb](https://short.mdc.mo.gov/4Cb).



## Juvenal Escobar

ST. LOUIS COUNTY,  
ST. LOUIS CITY  
CONSERVATION AGENT

*offers this month's*

# AGENT ADVICE

Conservation areas are a hot spot during the dog days of summer. If a specific conservation area is on your summer plans list, know before you go. Visit [short.mdc.mo.gov/Z9o](https://short.mdc.mo.gov/Z9o) and learn about that area's regulations, including hours of operation, activities allowed, the availability of campsites, picnic areas, and more. Though July is prime time to celebrate our nation's independence with fireworks, keep them at home. Remember, fireworks are not allowed within the confines of any conservation area. If you plan on hiking, stick to the trails, stay hydrated, and tell someone where you are going. Follow the rules, stay safe, and let's make it a memorable summer.

## What IS it?

Can you  
guess this  
month's  
natural  
wonder?

*The answer is on  
Page 9.*



# WE ARE CONSERVATION

Spotlight on  
people and partners

by Emily Franklin

## Bill and Dolly Shiang

➔ In 2013, Bill and Dolly Shiang traded big city living for the peace and quiet of their current property, which joins part of Rocky Creek Conservation Area. Their hope is to preserve as much of the surrounding natural habitat on the property as possible.


### Reclaiming the glades

The Shiangs learned that MDC discovered an important variety of natural resources in the area in need of conserving. They walked their property with Agent Brad Hadley and saw severely cedar-encroached glades. They were excited to hear about the benefits and potential for “reclaiming” the glades with the help of MDC. For the next six years, with the help of MDC staff, an AmeriCorps team, and grant-funded contractors, they have removed roughly 1,500 cedars from the 5-acre glade.

### In their own words

“There is still so much left to do, but we’re already seeing the return of wildflowers, insects, and a variety of wildlife. We’ve even seen a bear.”

📷 by Noppadol Paothong

A photograph of Bill Shiang, an older man with white hair, wearing a light-colored button-down shirt, blue jeans, a dark belt, and a baseball cap. He is standing in a field of green wildflowers and tall grass, with his hands in his pockets. The background is a dense forest of green trees.

Bill Shiang stands amongst the wildflowers on one of his glades.

What's **your** conservation superpower?



## APPLY ONLINE FOR MANAGED DEER HUNTS

Beginning July 1, deer hunters can apply online through the MDC website for a shot at more than 100 managed deer hunts throughout the state this fall and winter. The managed deer hunt application period is July 1–31.

MDC offers managed deer hunts for archery, muzzleloading, crossbow, and modern firearms from mid-September through mid-January at conservation areas, state and other parks, national wildlife refuges, and other public areas. Some managed deer hunts are held specifically for youth or for people with disabilities.

Hunters are selected by a weighted random drawing. Draw results will be available Aug. 15 through Jan. 15. Applicants who are drawn will receive area maps and other hunting information by email, or mail if an email address is not located on the customer's account.

Get more information on managed deer hunts, preview hunt details, and apply starting July 1 at [mdc.mo.gov/managedhunt](https://mdc.mo.gov/managedhunt). Details about managed hunts can also be found in the *2025 Fall Deer & Turkey Hunting Regulations and Information* booklet, available starting in early July at MDC offices and nature centers, from permit vendors around the state, and online at [mdc.mo.gov](https://mdc.mo.gov).

## NEW REGULATIONS FOR GINSENG DEALERS, HARVESTERS

MDC reminds ginseng harvesters and dealers of new regulations effective July 1. Under the new regulations, a Ginseng Dealer Permit will be required to buy and sell ginseng in Missouri starting July 1. The permit will cost \$100 for a Missouri resident and \$300 for a non-resident. Only holders of a Ginseng Dealer Permit may buy uncertified ginseng. New regulations will also require all ginseng root sold by a dealer to be certified. A dealer may possess uncertified ginseng root that has been purchased but must certify the root with an MDC conservation agent before selling it. The new regulations also add a \$25 fee per root certification.

A Ginseng Harvest Permit, available July 1, will also be required for harvesting ginseng in Missouri. There is an exemption for landowners where they can get a no-cost Landowner Harvest Authorization Number if they want to give away or sell ginseng root. Landowners will need to contact MDC Ginseng Program Coordinator Malissa Briggler at [Malissa.Briggler@mdc.mo.gov](mailto:Malissa.Briggler@mdc.mo.gov) or 573-522-4115, ext. 3151.

For more information on American ginseng, visit MDC online at [short.mdc.mo.gov/4yW](https://short.mdc.mo.gov/4yW), and for more information on harvesting ginseng, dealer regulations, and certification instructions, visit [short.mdc.mo.gov/4ys](https://short.mdc.mo.gov/4ys).



## WHAT IS IT? ARROWHEADS

Arrowheads, aquatic plants that grow on muddy banks or in shallow water, have arrowhead-shaped leaves that appear above the water. Their flowers, arranged in whorls, are unisex. The male flowers are more showy, with white petals and green sepals. Arrowheads are commonly referred to as duck potatoes due to their potato-like tubers. These serve as an important food for wildlife. They can also be baked, roasted, boiled, and even candied for human consumption.





# TASTE WHAT YOU'RE MISSING

FISH THAT PROVIDE UNEXPECTED CULINARY OPTIONS

by Gilbert Randolph







**H**umanity's culinary relationship with fish species is often bipolar. George Washington famously ran a commercial fishery for American shad in the Potomac River to help fund his Mount Vernon estate. Gizzard shad, many catfish anglers' preferred bait, has a long history of being eaten as a vinegar and salt brined type of sushi referred to as kohada or shinko. Today, if you were to show up to dinner with a plate of American or gizzard shad, you'd be hard pressed to find a group of Americans who'd be willing to give it a try. One generation's preferred species often becomes the next generation's most hated dinner item.

As is such, Missouri is home to a variety of fish that will surprise you with their excellent culinary value, despite their bad reputation amongst anglers. Targeting nongame fish will also sharpen your fishing skills and make you a more knowledgeable angler.

## FISH HANDLING

Before you go out and catch your fish, it's important to know the basics of proper fish handling so that you come home with the best quality meat that you can get your hands on. This is especially true for many of the species classified as nongame fish, which tend to be fatty and, by some accounts, more prone to spoilage.

The most important consideration is keeping your fish cold. During those blazing summer days, your catch can die quickly, and the quality of meat will deteriorate if left exposed to high temperatures for very long. It's best to dispatch your fish immediately after catching them, then make a cut into the throat right behind the gills to bleed them. Bleeding your fish will significantly improve the longevity and flavor of your fish. Also bring a cooler with ice or a cooler bag with ice to keep your fish cold.

Removing red meat can also help you avoid any strong flavors. With larger carp and catfish, this, in my experience, makes a difference in the flavor. With younger fish and species such as white bass or freshwater drum, I don't typically notice a difference in fish that have the red meat removed versus those that do not.

Now that we've covered the basics of fish handling, let's dive into some species specific information on preparing nongame fish.



This method of filleting is called butterflying. The spine is removed, but the skin and two fillets stay as a whole piece. This is an ideal way to grill whole fish.



Masgouf, a traditional Iraqi carp dish, is great cooked over an open flame. The fish is butterflied, covered in a spice rub, suspended on sticks or put on a grate, and cooked through on both sides.



Masgouf can be made with white bass, drum, buffalo, carp, and a variety of other fish. It goes great with flatbread and hummus.



## BUFFALO FISH

Buffalo fish are amongst my favorite nongame fish to catch and eat. They are fascinating, beautiful fish that also make fantastic table fare. There are still communities in Missouri who recognize the value of buffalo fish, and they have historically been one of the most targeted species for commercial fishing on the Missouri and Mississippi rivers. It's also very important to note that buffalo fish are native fish and are not carp. People who don't know how to tell the difference between the common carp and our native buffalo fish waste an unfortunate amount of buffalo fish every year.

The main giveaways will be color and the lack of barbels. Buffalo fish do not have barbels around their mouth like common carp. Buffalo fish also tend to be a striking blue-gray but will turn to a splotchy pink when they are kept out of the water. Since buffalo fish are a slow growing, slow producing fish, make sure you know the difference and can harvest these native species responsibly.

They do have a well-deserved reputation for being bony, as the main section of the fillets have a series of large Y-bones that either need to be cooked out or removed in a grinder. If you aren't shy about bones, buffalo fish are excellent when smoked, and the meat can be deboned to eat plain or put into a smoked fish dip. Don't neglect the collars of the fish for smoking as well. This ground meat can be used to make fish cakes, fish balls, and boudin. One of my favorites is to brine the fillets before grinding them and make a smoked boudin that is spiced as German sausage.

The meat along with ribs is often prepared as fried buffalo ribs. Larger buffalo fish will yield a large boneless fillet from the top of the ribs that is excellent seared, fried, or smoked. When filleting the fish, simply fold back the main section of the fillet and use the tough rib bones as a guide to make sure you get the highest yield possible.

*Carp have become invasive, and harvesting will help slow their spread. More information on invasive carp control can be found at [short.mdc.mo.gov/4Tr](http://short.mdc.mo.gov/4Tr).*



Black buffalo



Bigmouth buffalo



Smallmouth buffalo



Grass carp



Common carp

## CARP

Carp have become a catch-all for a variety of species, from common carp to bighead carp, but we'll focus on two — grass carp and common carp. Common carp were introduced as a food source in the states when stocks of native fish in our big rivers began to decline due to overharvest. They never caught on with Americans despite still ranking amongst the most farmed and eaten species of fish worldwide.

Grass carp are more aggressive when feeding, grow to incredible sizes, and offer a mild, fatty meat that is hard to beat in a smoker. When handled correctly, common carp can yield surprisingly delicious table fare.

The preparation of both these species of carp is almost identical to buffalo fish. The main sections of the fillets have an abundance of Y-bones, so they lend themselves to smoking or being ground. Both common and grass carp can yield generous fillets from the ribs. They can be prepared in the same way as buffalo ribs.

Masgouf, a popular Iraqi dish, is a carp specialty. It consists of a carp that has been split, the meat rubbed with curry and salt, and roasted over an open fire. A tamarind and tomato-based sauce is then brushed over the meat, and it is served with rice. It's a knockout preparation that can be used on any variety of fish and will impress guests with its rustic, yet flavorful, profile.

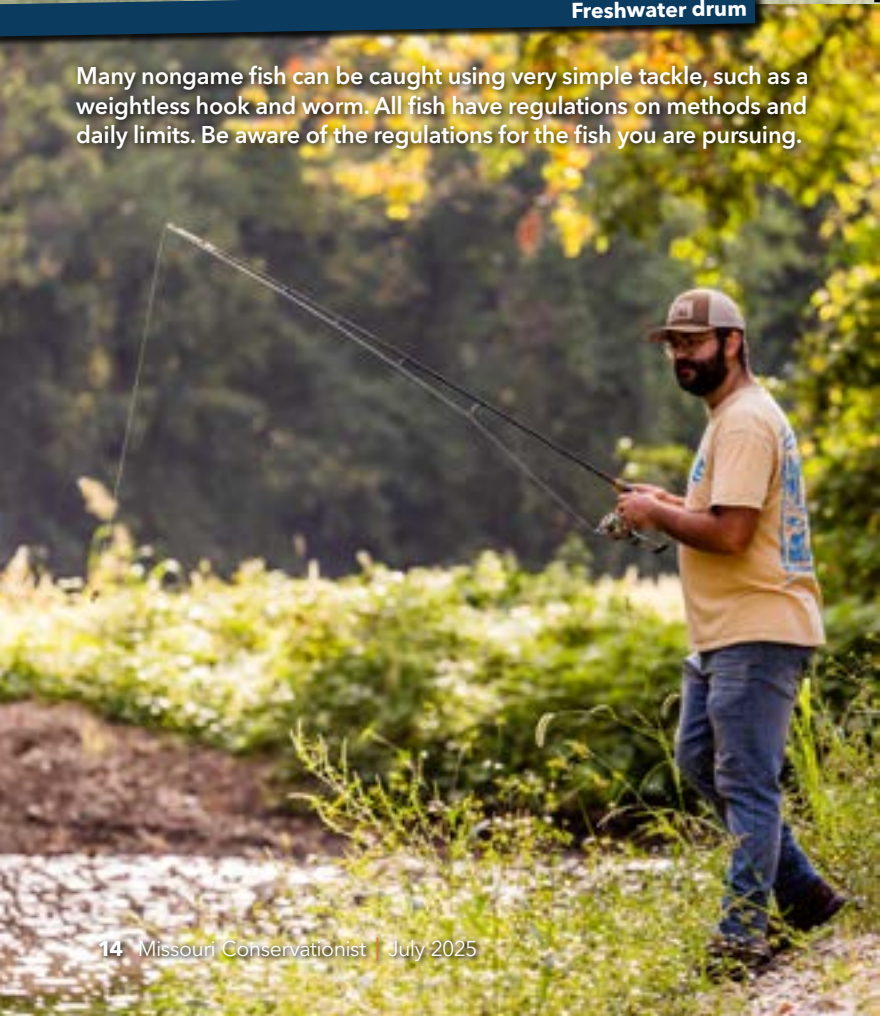


Softshell turtle



Freshwater drum

Many nongame fish can be caught using very simple tackle, such as a weightless hook and worm. All fish have regulations on methods and daily limits. Be aware of the regulations for the fish you are pursuing.



## SOFTSHELL TURTLE

Yes, a reptile has snuck its way onto this list. Most catfish anglers have had their bait stolen by soft-shell turtles, but do not throw these turtles back if you're fishing during their season. Turtle soup is a dish largely lost to the modern American palate and one that deserves broader recognition for its value. Softshell turtles are also much easier to clean than their hard-shelled relatives.

Softshell turtle meat can be braised, deboned, and used as a clam substitute for cream-based chowders as well as used in any classic turtle soup recipe. It is also excellent deboned and fried.

To prepare a softshell turtle, you'll need to cut the front and hind legs from the carapace. Their skin is tough and leathery, so you'll need a sharp knife. You can use the plastron or bottom part of their shell as a guide for where to cut and then use kitchen shears or tin snips to sever the spine. Once the back legs are removed, skin them and either debone the meat to fry or you can keep them whole to slow cook. Make sure to skin and save the neck for your broth if making a fish or clam chowder.

## FRESHWATER DRUM

Freshwater drum is a species that suffers an undeserved reputation for a number of things. Likely due to their suckerlike mouth, some think they are "bony," like carp and buffalo fish. They do not, however, have Y-bones. They do have a few pin bones between the upper and lower parts of the fillets, much like walleye or white bass, which can easily be filleted out. Drum do tend to have a smaller weight to fillet ratio than other fish of similar size thanks to their big heads.

I've found that small- to medium-size drum are almost indistinguishable from other white-fish, such as catfish or white bass. As with all the fish on this list, bleeding drum will yield a milder fillet that lends itself better to frying. They can also be seared with Cajun spices and added to your favorite po' boy recipe. Blackened drum with homemade coleslaw on a toasted bun will change your mind about these fish.

Freshwater drum can grow to prodigious sizes, the largest being a 54-pound, 8-ounce specimen caught in Tennessee. It is the larger fish of these species that likely caused its culinary notoriety. Larger drum tend to have tougher meat, which some have described as "chickeny." While these larger fish can also be ground and turned into fish cakes or smoked, I prefer to release larger drum to fight another day and produce more of the smaller drum that I prefer to eat.



## GAR

Missouri is home to longnose, shortnose, spotted, and alligator gar. As a protected species in Missouri, the alligator gar cannot be harvested, but the other three species are abundant throughout the state. Gar is a long-standing part of Cajun culinary history, even if they aren't top of the list for Missouri anglers.

Cleaning a gar is no easy task as they have ganoid scales, which are too tough to cut through with a fillet knife. Tin snips or heavy kitchen shears are needed for this job. The easiest way to clean a gar is to make cuts down the spine so the rough scales can then be separated from the meat. Younger gar are suitable fried, but larger specimens can have tough connective tissue, much like the kind found in tuna. Flaking the meat or grinding it is the best way to remove it.

As mentioned, gar balls, which are essentially a deep-fried fish cake, are a popular way to prepare these fish. Gar can also be brined and smoked, turned into fish sausage, blackened for fish tacos, and more.

*As a protected species in Missouri, the alligator gar cannot be harvested, but the other three species are abundant throughout the state.*

Whether you are chasing buffalo fish, gar, or softshell turtles, adding nongame fish to your recipe book will open new angling opportunities and grow your appreciation for the species that inhabit our waters. ▲

*Gilbert Randolph is a writer and an avid outdoorsman. When he's not creating stories in the digital space, he's exploring nature and sharing it with people.*



Longnose gar



Shortnose gar



Spotted gar



The alligator gar is Missouri's largest gar and has a distinctively short, broad snout.

Additional recipes can be found online at [short.mdc.mo.gov/4mN](https://short.mdc.mo.gov/4mN) or in *Cooking Wild in Missouri* by Bernadette Dryden, available for \$16 at most MDC nature centers and online at [mdcnatureshop.com](https://mdcnatureshop.com). MDC also hosts field to fork cooking events across the state. Visit the online events page at [mdc.mo.gov/events](https://mdc.mo.gov/events) for more information.





# NEVER LOSE TOUCH

## YOUR GUIDE TO RECONNECTING WITH NATURE







## → *Nature is ...*

Whenever you ask people to finish this sentence, you get all kinds of answers.

Nature is in my backyard.

Nature is fishing at a lake.

Nature is hunting deer and turkey.

Nature is hammocking on my college campus.

Nature is bugs that bother me.

Nature is the bird on my bird feeder.

Nature is hiking.

Nature is a picnic at the park.

The answers are as unique as the outdoor activities people enjoy.

But what is even more meaningful is when they answer with how nature has changed them or made their lives better.

Nature is a sanctuary.

Nature is where I can finally catch my breath.

Nature is a place where I feel at peace.

Nature is precious time with my family.

Nature is where memories are made.

Nature is where I laugh with friends.

Nature is where I put down my problems and remember the bigger picture.

Nature is my healing place.

Nature is home.

Whether you are new to exploring nature or an experienced outdoor enthusiast, nature wants to be the best part of your story. It wants to invite you to explore that trail, cast a line, watch the sunrise on opening day, swing in a hammock, or hear a new bird song. It wants you to embrace nature as a solo endeavor when you need silence and solitude or to invite others along with you when you need to connect and catch up around the campfire.

The following pages are filled with stories of how nature connects us. How it motivates, how it builds memories, how it binds us together, how it can build a bigger and better story.

Nature is an invitation for all of us. Are you ready?

On the Jacks Fork

PHOTOGRAPH BY  
KYLE WAYNE STEWART





# Chasing Gobblers

Ryan Miloshewski

The thick fog covered the hollows and ridges of the Rosebud property like an eerie blanket. An eastern towhee sounded off as I crept by him. Northern cardinals sang their dawn cadence, and black-capped chickadees signaled to the woods a stranger was encroaching. A chilly 40 degrees, it was a perfect morning in the spring turkey woods of Missouri.

Turkey season is not for the faint of heart. It can batter, test, and cause you to question your skills. After hunting eight straight days in unseasonably warm temperatures, this morning was a blessing. And it knocked me out of my funk.

I woke up early on April 24, 2024, and readied myself for another day chasing Ozark gobblers. I had been beaten multiple times already, and I was tired.

But I was there, so I had to go. As I slowly made my way on the half-mile walk to my hunting spot, I finally found the peace I had been chasing since opening day. I made it to the ridge I wanted to hunt, sat down on a log, and poured myself a hot cup of coffee. No gobbles or yelps, but I was having the most enjoyable morning I have had in years.

The activity of warblers, orioles, and other spring songbird staples kept me busy for a few minutes as I drank my coffee. If I did not see a turkey all morning, I would have been more than pleased.

Then, a gobbler cut through the chorus of a courting summer tanager. He was far, but I called anyway. He answered, and 10 minutes later I had a quadruple bearded tom before my coffee ever had a chance to cool down.

Sometimes as a hunter you get obsessed with the pursuit. It takes certain experiences to make you realize the true importance of getting out in Missouri's outdoors. When you finally realize why you are out there, the spirits reward you.

I have been getting outside in Missouri since I could walk — fishing for Taneycomo trout, hunting turkeys, deer, and waterfowl. Every year is full of new experiences, encounters, and lessons learned. I relish the opportunity to trek the Ozark ridges and hollows, and I will until I am no longer on this earth.

---

*Ryan Miloshewski is a freelance outdoor writer. He enjoys chasing ducks, turkey, deer, walleye, and trout with his dog Hank across Missouri's seasons.*





# Casting Memories

Marcus Wilkins

“The moment” happens every year.

Standing half submerged, the Current River’s icy squeeze around my fishing waders, I gaze up the misty path emanating from the emerald corridor beyond. A gentle breeze harmonizes with the swish-splash refrain of cast lines, intermittently muffling the quips and chuckles of fellow anglers. Sunbeams pierce the forest canopy and illuminate cottonwood seeds magically drifting to the water’s crystalline surface.

This is heaven.

Rather, it’s Montauk State Park — Dent County’s scenic trout-fishing destination about 12 miles east of Licking. For more than a decade now, my friends and I have annually descended upon the oasis to celebrate the life of my late brother-in-law, Morgan Burnham.

Nearly every member of the “The Montauk Marauders” individually considered him to be our best friend before he died from a mysterious liver illness in 2013 at the too-young age of 33. Morgan’s final text message to one of us arrived days from his passing like a missive from beyond: “Heading into Montauk. Couldn’t wait. Buy a lottery ticket! Cosmic energy is high right now!”

Our band of brothers typically camps up the hill in cabins or an RV park at the

intersection of State Highway VV and MO-119. For four days and three nights, it’s the idyllic setting for connecting with nature and unplugging — save for the fireside speaker belting out hits.

Mornings begin with a bumpy truck ride down the hill for the day’s first catch. At least one day culminates with a fish fry, yard games, and the trip’s most successful fisherman boasting about his bounty.

For some of us, the getaway is a rare opportunity to escape workaday life and the stressors therein. No deadlines. No dishes. No diapers.

But Montauk also provides renewed perspective and quiet moments to remember what it’s all about. The healing waters of the Current River serve as a metaphor for time’s passage and a bracing entreaty from Morgan to soak up — while you can — all that “cosmic energy.”

*Marcus Wilkins is a journalist and marketing writer with 21 years of experience in newspapers, magazines, digital copywriting, and public communication. A University of Missouri alumnus, he most enjoys telling stories about people whose work changes lives and enriches communities.*





# *In Harmony with Nature*

Neima Shahdadi

There are few activities in life that can provide relaxation, uncertainty, beauty, exhilaration, and frustration, often in equal measure. Whether alone in a kayak, on a boat with family, or shoulder to shoulder in the cold water of a spring branch, fishing can transport us to a special world—a world in harmony with nature where we can leave behind the baggage of everyday life and become immersed in the simple act of cast and retrieve. There's an innate optimism to fishing. With each hopeful cast we eagerly anticipate landing something remarkable. Sometimes we do, but more often than not, we cast a new hope on the other side of the boat.

But when we do feel that unmistakable thrill of a fish tugging at the end of the line and manage to wrangle it out of the water and into our hands, the experience is nearly incomparable, bested only by witnessing our children do it for the first time on their own.

Missouri is home to over 700 conservation fishing areas, not to mention rivers, creeks, public lakes, or privately stocked waters. No matter where you live in the Show-Me State, there's likely a body of water near you where you can drop a line without traveling far. Like any hobby, there's no shortage of ways to supplement and accessorize, but you don't have to spend a small fortune on tackle, watercraft, or fishing guides to be a successful angler. For many of us, the most memorable and enjoyable days on the water involved little

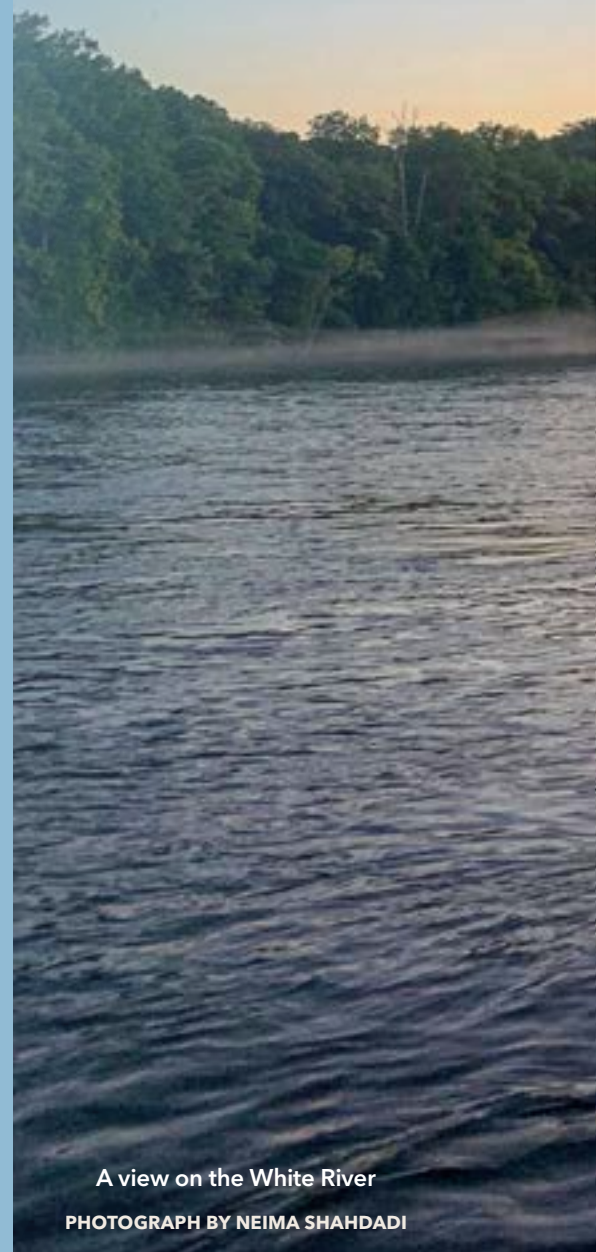
more than a cheap pole and a can of nightcrawlers from the local gas station. And while we may not remember the fish we caught years later, the time spent with friends or family trying to catch them is what was most important.

If you're new to fishing, you can likely find a low-cost, entry level rod and reel at your local sporting goods store along with bait and hooks. Regardless of bait type, make sure to learn how to properly tie a hook. There are numerous methods but find something simple (like the improved clinch or Palomar knots) and practice until you're comfortable. Attaching a bobber to your line will also help to alert you once you've gotten a bite. Be sure to familiarize yourself with Missouri fishing regulations as well as those at your chosen fishing hole before venturing out.

Once you've decided on your location, look for a spot where the fish are hiding rather than looking for where the fish are. You may have to adjust your depth depending on the temperature of the water and time of year, but don't hesitate to try a new spot if you're not getting bites after several attempts. More importantly, take a moment (or several) to appreciate the peace of mind and reverence for the natural world that fishing can provide. After all, a bad day of fishing is still better than a good day of work.

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*Neima Shahdadi is a freelance writer and academic advisor. He lives in Boone County with his wife, daughter, and two dogs.*



A view on the White River

PHOTOGRAPH BY NEIMA SHAHDADI







# Public Land is Your Land, Too

Will Rechkemmer

As Missourians, we are lucky to have access to well over a million acres of public land, set aside for all of us to enjoy. As an outdoor enthusiast who spends the majority of my time outdoors on public land, I can tell you that getting out there and enjoying whatever outdoor pursuit interests you the most isn't as hard as you think. Some of my favorite outdoor memories have been made on public land.

On a recent hunt this past firearms deer season, my wife and I backpacked in 2 miles to get away from other hunters in an area where we found fresh buck sign earlier in the year. It was going to be our last chance to get a hunt like this in. Although we didn't see any bucks, my wife was able to harvest a doe, which we broke down and carried out in quarters, similar to a western style elk or deer hunt. This is a hunt I'll never forget, from a 45-minute hike in the dark, to each of us carrying about 50-pound backpacks with gear and meat 2 miles back to the truck.

In reality, memories are what keep us going back, and you

can get out there and make memories of your own. One of my favorite things about public land is the ability to explore new areas and see new sights, and with the quantity of public land in our state, you could explore a new place every weekend and never see the same thing twice.

Public land is found all across the state, each with its own rules and regulations; however, the vast majority is open to activities like hiking, hunting, and fishing. These days there is also a laundry list of tools to find nearby public land such as the Missouri Department of

Conservation's *Find Places to Go* page ([short.mdc.mo.gov/Z9o](https://short.mdc.mo.gov/Z9o)), OnX mobile apps, GAIA, All Trails, and many more. Exploring public land can be daunting at first, but there are so many opportunities across our state that I encourage you to give it a try next time you're planning an outdoor trip. You never know what hidden gem you may find.

*Will Rechkemmer is a wildlife biologist and outdoorsman. He enjoys spending his free time hunting, camping, and fishing with his wife, Danita, and dog, Rye.*

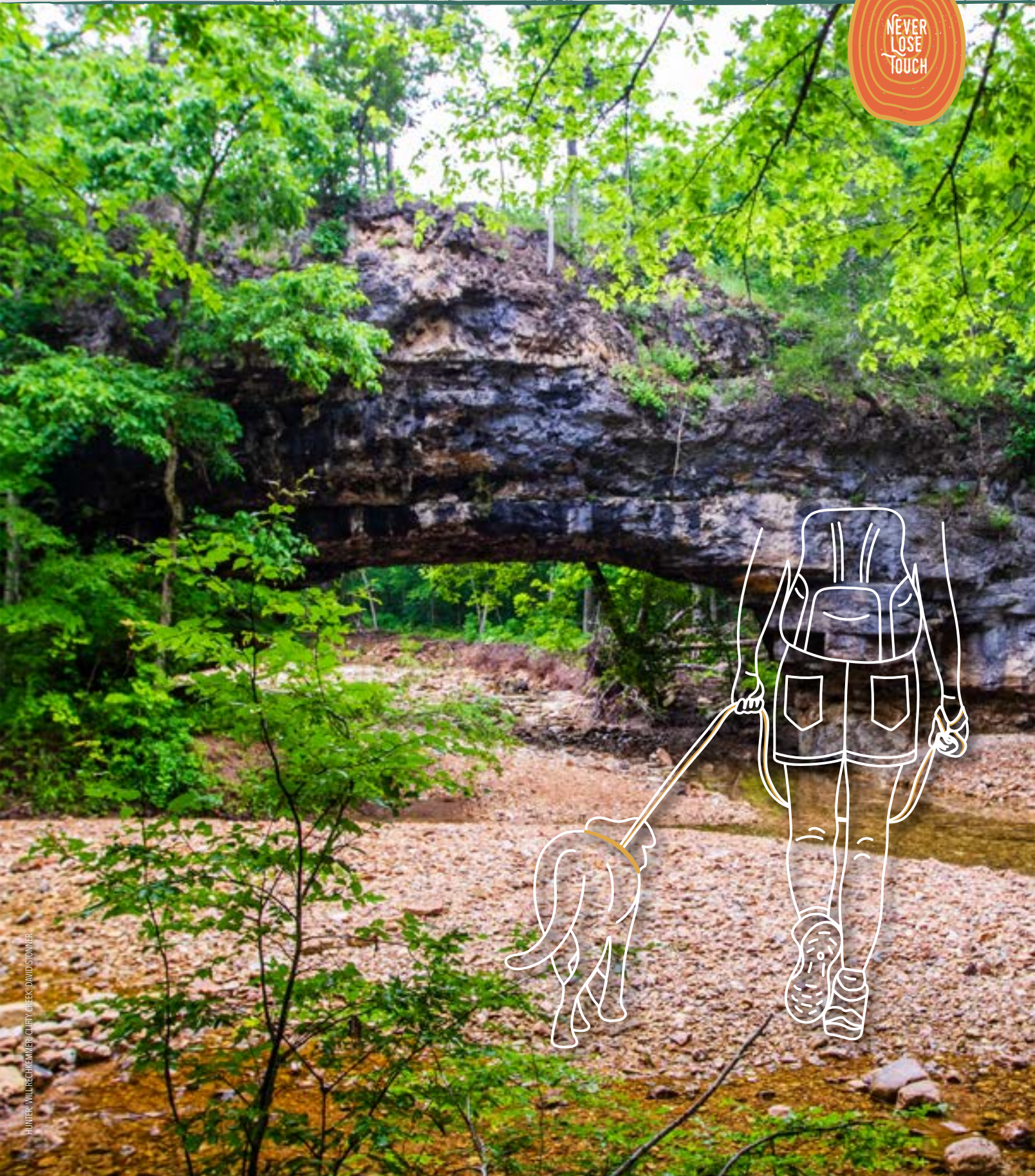


## FIND WHERE TO GO

Finding places to make memories in nature is easy with the free mobile app **MO Outdoors**.

Users can quickly find MDC places close to home for birdwatching, fishing, hiking, camping, or hunting. Available in Android or iPhone platforms at [mdc.mo.gov/mooutdoors](https://mdc.mo.gov/mooutdoors).





HUNTER WILL RECHREMMER, CLIFTY CREEK, DAVID STONNER



# Lessons in the Rocks

Jessica Marie Baumgartner

I've always loved wandering forests and creeks, but there's one place that feels like going home — Rockwoods Reservation near St. Louis. My mom took me to this amazing nature reserve when I was a little girl. It has thrived since becoming a protected area after limestone mining left the forest decimated nearly 100 years ago.

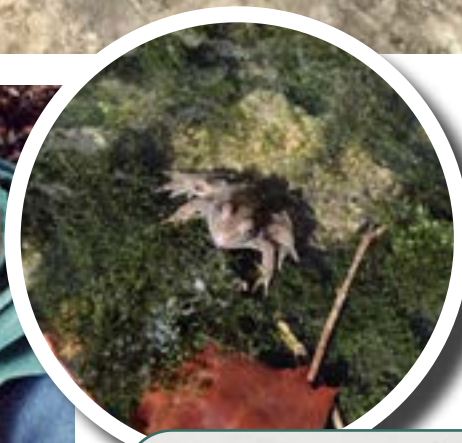
Taking my kids here is a tradition I hope they will pass on to their children. My husband and I go there to walk the paths, take in the scenery, and discover wildlife of all kinds. When I was pregnant with our youngest child, one particular trip gave the kids the sense of wonder they needed while expelling energy and helped me to relax and exercise in my favorite setting.

Our two sons bounded ahead of their older sister. The kids jogged along until we came to our favorite stream. It intersected the trail and had plenty of stepping stones.

My frog-loving daughter jumped onto a rock in the water and pointed. "Look!"

Just near the small cave where the water came out, each rock held a frog. I took my squirmy red-headed son over the rocks to see, and we marveled at the amphibians. We discussed their life cycle and how frogs are different from toads.

My son knelt on the rock underneath him and pointed. I bent down to find a Missouri millipede stretching in the sun. I had never seen one so close. We watched it



## ON A SOLO JOURNEY?

Listen in as **Nature Boost** host Jill Pritchard explores everything nature has to offer — from health benefits and wildlife viewing, to outdoor recreation and unbelievable conservation stories. Subscribe and stream on Apple Podcasts, Spotify, or wherever you listen to your favorite podcasts.

JESSICA BAUMGARTNER

crawl along. I told my son about being quiet and gentle when observing wildlife to give creatures the space they need to teach us about their world.

Every hike holds different lessons, but my children still talk about this experience, and we always look for our frog and millipede friends when we visit that rock.

*Jessica Baumgartner is a homeschooling mother of five, author, and freelance reporter for Mid Rivers Newsmagazine. She is all about adventuring through life with activities like swimming, hiking, and raising backyard chickens.*





## CAMPFIRE QUESTIONS

Sitting around the fire and roasting marshmallows is a great way to make memories. Next time you're gathered around a campfire, consider these questions to get to know your adventure buddies (and yourself) better.

- ❓ Go-to road trip song?
- ❓ Tech-free camping or gadget glamping?
- ❓ Favorite nature memory?
- ❓ Dream camping spot?
- ❓ What national park would you live in for a year?
- ❓ Must-bring snack?
- ❓ S'mores: classic or do you add a twist?
- ❓ The best campfire treat you've ever had that's not a s'more.
- ❓ What's a random skill no one knows you have?
- ❓ What part of nature instantly brings you peace?
- ❓ If you were a tree, which would you be?
- ❓ If you could go on a camping trip with a historical figure, who would it be?
- ❓ Most epic outdoor adventure?
- ❓ Outdoor activity you want to try but haven't yet?
- ❓ A nature adventuring hack you swear by.
- ❓ How do you unwind in nature?
- ❓ Most peaceful spot you've ever found in nature.
- ❓ What's the best Missouri Conservation Area?

*How can we choose just one?*



## Float-Camping

Kyle Wayne Stewart

I've always identified as a Missourian. I was born and raised here. And I've lived my entire life within the borders of the Show-Me State. However, it was my wife, a native Californian, who showed me what it really means to be a Missourian.

I grew up camping, floating, fishing, hiking, and hunting with my family, so I thought I had everything covered — until my wife asked if I had ever float-camped. I had not, but it combined two of my favorite things, so I was down.

Soon we were making plans to do a float-camping trip on the beautiful Jacks Fork River. We put in at Buck Hollow, splitting all our camping gear, coolers, and firewood between our two canoes and we pushed off. We would be on the river for three days and two nights, eventually reaching our takeout at Alley Spring.

The time on the water was a revelatory experience — float along leisurely, stop to swim when you get too hot, stop for a

shore lunch, and then start scoping the riverbanks for a suitable camp spot. Build your tent and your campfire, eat dinner, explore a little bit, swim a little bit, and fall asleep to the sounds of whip-poor-wills in the distance. Wake up as the fog lifts from the river running beside your camp, make coffee and breakfast, pack it up, and hop back in your canoe. Rinse and repeat.

Years later, my wife and I still look forward to our annual float-camping trips in the heart of Missouri's Ozarks. But I will always remember my first time as being an incredible experience and redefining what it means to me to be a Missourian.

*Kyle Wayne Stewart is a freelance writer who writes about the things he loves, mostly outdoor adventures, travel, endurance sports, backroads, and bicycles.*



# SO YOU WANT TO GO

In most cases, a solid pair of shoes and quality socks is all you need to start having a great time outdoors. But if you need a little more guidance, check out this handy flowchart to help you figure out what gear you might need. Don't forget to check the activity or wildlife regulations for the place where you plan your adventure and never go on private property without permission of the landowners.

# OUTSIDE?

How much  
time do  
you have?

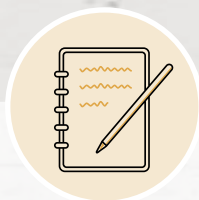
Half a day  
or more.

How  
strenuous of  
an activity are  
you up for?

A few hours  
or less...

Don't  
exhaust  
me.

I can handle a  
bit of sweat.



## Nature Journaling

A nature journal can be as fancy or basic as you need it to be. Draw what you see in your outdoor venture, write out a gratitude list, or simply get those messy thoughts down on paper to give yourself some moments of Zen. With the added mental boost from being outdoors, nature journaling might just become your go-to summer getaway.



## Nature Viewing

A popular activity in the category of nature viewing is birding, but that doesn't mean just looking into the skies. A basic pair of binoculars will do wonders to help you scope out what critters are up to, and they can spot more than just birds. A hike in the woods, a drive through a conservation area, or even a park-bench picnic can provide great opportunities to watch Missouri wildlife do its thing.



## BUT FIRST!

Some standard items are key to any venture outdoors:

- **Water**
- **First-aid kit**  
Even just basic bandages are a good idea.
- **Sunscreen**  
(and a hat or sunglasses)
- **Insect repellent**
- **Snacks**





# Get Outside

in JULY → Ways to connect with nature



## One Fish, Two Fish, Red Fish ... Bluegill



**Bluegills** nest into late July or August. They nest in water 1 to 2 feet deep, preferably in gravel bottoms. Males guard the nests until the eggs hatch. However, certain non-nesting males, called sneakers or satellites, have the color pattern and behavior of females and enter other males' nest areas and fertilize eggs without alerting the territorial, nest-holding male.

## Bluebird of Happiness

The **eastern bluebird**, Missouri's official state bird, delights birdwatchers with its cheerful song and bright plumage. It is often associated with happiness. During breeding season, bluebirds become extra territorial and may attack their reflections in mirrors and glass. To prevent injury to the bird, cover reflective surfaces with fabric, paper, paint, or stickers. An old sock or a grocery bag fits nicely over side mirrors.

## Missouri's Lobster Roll

New Englanders have an affinity for lobster rolls and they will often make an appearance on their tables during Fourth of July celebrations. Here in the Show-Me State, we can have our own version thanks to **lobster mushrooms**.

These choice edibles, named for the color of a cooked lobster, appear through October.



## Nature's Fireworks

Throughout July, Missouri's native flowers open up and dot the landscape with color. A couple of interesting ones to look for are **passion flowers** and **blazing stars**. But there are so many more! To learn about Missouri's wildflowers, visit [short.mdc.mo.gov/Zri](http://short.mdc.mo.gov/Zri).



### Natural Events to See This Month

Here's what's going on in the natural world.



White-tailed deer fawns join the herd.



Ebony jewel-wings fly near streams.



Regal moths peak this month.



Find more events in your area at [mdc.mo.gov/events](https://mdc.mo.gov/events)

KANSAS CITY REGION

## CONSERVATION ADULTS: Ladies Night Out at Burr Oak Woods

Tuesday • July 15 • 6–8 p.m.

Burr Oak Woods Conservation Nature Center

1401 NW Park Rd, Blue Springs, MO 64015

Registration is not required. For more information, call 816-228-3766 or visit [short.mdc.mo.gov/4Cg](https://short.mdc.mo.gov/4Cg).

Ages 16 and older

Let's get outside for a fun-filled sunny summer evening of outdoor adventure under the sky. Discover how to use an **atlatl**, test your archery skills, dip your toes into kayaking, and participate in other outdoor activities that will enhance your experiences in nature. Wear closed-toe shoes and bring a water bottle.

VIRTUAL

## LEARN TO FISH: Virtual Fly Tying with T.J. and Mike

Thursday • July 10 • 6–7 p.m.

Online only

Registration required by July 10. To register call 888-283-0364 or visit [short.mdc.mo.gov/4Cf](https://short.mdc.mo.gov/4Cf).

All ages

Come and tie flies with T.J. and Mike. This night's theme is parachutes. We will explore different posts, different ways to tie on your parachute, and different ways to whip finish a parachute.

## America's Bloom

If you're looking for a patriotic-sounding flower this Fourth of July, take a trip to your nearest prairie. There you will find **American bluehearts** in bloom. The five-petaled blossoms are actually purple, but for the purposes of patriotism, we'll stick with the moniker of "blue" hearts.



Diamond-backed watersnakes become nocturnal to avoid the heat.



Gooseberries ripen.

SIMPLE  
×  
OUTDOOR  
×  
MOMENTS



# WILDLIFE VIEWING

Spending time in nature  
is never wasted.

FIND A PLACE TO GO.

Download the free  
MO Outdoors app.





# Places to Go

## NORTHEAST REGION

### Charlie Heath Memorial Conservation Area

The way things work out  
by Larry Archer

✱ The family of Charlie Heath donated 120 acres in northeast Missouri's Clark County in 1975 with one request — build a lake. Subsequently merged with the adjacent Clark State Forest and bolstered by other acquisitions, Charlie Heath Memorial Conservation Area (CA) grew to more than 1,600 acres with multiuse trails, wetlands, and forests — but no lake.

Geological sampling determined the donated property to be unsuitable for a lake, but eventually a 108-acre lake was built on nearby property that became Fox Valley Lake CA. So, instead of boating, fishing, and all things aquatic, visitors to Heath Memorial CA are more likely to be about all things equestrian, according to Wildlife Biologist Matthew Schwend.

"It's a pretty popular horse trail and hiking trail," Schwend said of the area's 6.3-mile multiuse trail. "I have a lot of horse trails in my district, and that's one of the ones that gets used pretty frequently."

With nearly 90 percent of the area forested, including almost 6 miles of stream frontage along the Fox River and Burnt Shirt Branch, Heath Memorial CA provides habitat for many migratory and breeding forest birds, contributing to its designation as a National Audubon Society important bird area.



NOPPADOL PAOTHONG

WHAT  
TO  
LOOK  
FOR  
WHEN  
YOU  
VISIT



Eastern wood-pewee












## CHARLIE HEATH MEMORIAL CONSERVATION AREA

consists of 1,635.5 acres in Clark County. From Kahoka, take Highway 136 west, then Route K north 8 miles.

40.577, -91.9065

[short.mdc.mo.gov/4Co](http://short.mdc.mo.gov/4Co) 573-248-2530

### WHAT TO DO WHEN YOU VISIT

-  **Bicycling** Includes multiuse trail and improved service roads totaling 8.3 miles. Trail closed during firearms deer and spring turkey seasons.
-  **Birdwatching** Included in the National Audubon Society's Fox River Bottoms Important Bird Area ([short.mdc.mo.gov/49v](http://short.mdc.mo.gov/49v)). The eBird list of birds recorded at Heath Memorial CA is available at [short.mdc.mo.gov/4CZ](http://short.mdc.mo.gov/4CZ).
-  **Camping** Designated camping sites; open camping (walk/float/backpack, except during deer and spring turkey season).
-  **Fishing** Catfish, sunfish.
-  **Hunting Deer and turkey** Regulations are subject to annual changes. Refer to MDC's regulation page online at [short.mdc.mo.gov/Zjw](http://short.mdc.mo.gov/Zjw). Also **quail, rabbit, squirrels**.
-  **Trails** Multiuse (hiking/biking/horseback riding) trail totaling 6.3 miles. Trail closed during firearms deer and spring turkey seasons.
-  **Waterfowl Hunting** Regulations are subject to annual changes. Refer to MDC's *Migratory Bird and Waterfowl Hunting Digest* online at [short.mdc.mo.gov/4SZ](http://short.mdc.mo.gov/4SZ) for details.



Indigo bunting



Southern leopard frog



Red-eared slider



Great blue heron



Small-mouthed salamander





## Common Blackberry

*Rubus allegheniensis*

### Status

Native

### Size

5 feet; spread: 8 feet

### Distribution

Statewide

**C**ommon blackberry is a fast-growing, colony-forming shrub. It flowers from April to June. The blooms are showy with five white petals. The shrub bears fruit from June through August. Deep-violet to black berries, approximately  $\frac{3}{4}$  inch long, grow in abundance on these shrubs. For generations, berry-pickers have braved the maze of blackberry brambles, the scratches, and the chiggers to collect these juicy berries for pies, preserves, or just plain eating.



### HUMAN CONNECTIONS

The common blackberry is very popular as an edible landscaping plant. Blackberries are nutritious and are a good source of vitamins C and K, manganese, fiber, and antioxidants, with a low glycemic index. Many people rank them as a "superfood," since they're high in nutrients, fiber, and antioxidants and low in carbohydrates and fat.

Blackberry recipes abound, and it seems that people come up with new culinary uses for them each summer.



### ECOSYSTEM CONNECTIONS

Blackberries also provide benefits for wildlife — the flowers are excellent sources for pollinators, and the fruits are loved by songbirds and other animals.

Deer eat the fruit and browse the tender canes. Other mammals that eat blackberry fruits or other plant parts include elk, foxes, bears, rabbits, raccoons, opossums, squirrels, mice, and chipmunks. It also makes up much of a turkey's summer diet. The list of other birds that eat blackberry fruits is long. And the prickly briar patch provides much-needed shelter for small mammals and nesting birds.

Blackberry flowers (very similar to wild rose or strawberry flowers) are a favorite nectar source for many pollinators, while a variety of insects consume the leaves, sap, stalks, or other plant parts of blackberry bushes.

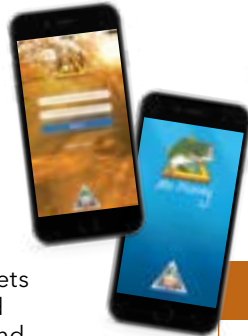


# Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

## Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to view permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you view permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at [short.mdc.mo.gov/Zi2](https://short.mdc.mo.gov/Zi2).



## FISHING

### Black Bass

Impounded waters and non-Ozark streams:  
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Keep:  
May 24, 2025–Feb. 28, 2026

### Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2025

### Nongame Fish Gigging

Impounded waters, sunrise to sunset:  
Feb. 16–Sept. 14, 2025

Streams and impounded waters,  
sunrise to midnight:  
Sept. 15, 2025–Feb. 15, 2026

### Paddlefish

On the Mississippi River:  
Sept. 15–Dec. 15, 2025

### Trout Parks

State trout parks are open seven days a week  
March 1 through Oct. 31.

Catch-and-Keep:  
March 1–Oct. 31, 2025

## HUNTING

### Black Bear\*

Oct. 18–31, 2025

### Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2025

### Coyote

Restrictions apply during April, spring turkey season, and firearms deer season.

Open all year

### Crows

Nov. 1, 2025–March 3, 2026

### Deer

Archery:

Sept. 15–Nov. 14, 2025

Nov. 26, 2025–Jan. 15, 2026

Firearms:

- ▶ Early Antlerless Portion (open areas only):  
Oct. 10–12, 2025
- ▶ Early Youth Portion (ages 6–15):  
Nov. 1–2, 2025
- ▶ November Portion:  
Nov. 15–25, 2025
- ▶ CWD Portion (open areas only):  
Nov. 26–30, 2025
- ▶ Late Youth Portion (ages 6–15):  
Nov. 28–30, 2025
- ▶ Late Antlerless Portion (open areas only):  
Dec. 6–14, 2025
- ▶ Alternative Methods Portion:  
Dec. 27, 2025–Jan. 6, 2026

### Doves

Sept. 1–Nov. 29, 2025

### Elk\*

Archery:

Oct. 18–26, 2025

Firearms:

Dec. 13–21, 2025

### Groundhog (Woodchuck)

May 12–Dec. 15, 2025

### Pheasant

Youth (ages 6–15):

Oct. 25–26, 2025

Regular:

Nov. 1, 2025–Jan. 15, 2026

### Quail

Youth (ages 6–15):

Oct. 25–26, 2025

Regular:

Nov. 1, 2025–Jan. 15, 2026

### Rabbits

Oct. 1, 2025–Feb. 15, 2026

### Sora, Virginia Rail

Sept. 1–Nov. 9, 2025

### Squirrels

May 24, 2025–Feb. 15, 2026

### Teal

Sept. 13–21, 2025

### Turkey

Fall:

- ▶ Archery:  
Sept. 15–Nov. 14, 2025  
Nov. 26, 2025–Jan. 15, 2026
- ▶ Firearms:  
Oct. 1–31, 2025

### Waterfowl

See the Migratory Bird and Waterfowl Hunting Digest or visit [short.mdc.mo.gov/ZZx](https://short.mdc.mo.gov/ZZx) for more information.

### Wilson's (Common) Snipe

Sept. 1–Dec. 16, 2025

### Woodcock

Oct. 18–Dec. 1, 2025

\*Only hunters selected through a random drawing may participate in these hunting seasons.

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at [short.mdc.mo.gov/Zib](https://short.mdc.mo.gov/Zib). Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at [short.mdc.mo.gov/ZZf](https://short.mdc.mo.gov/ZZf).





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Nature provides endless opportunities for fun and adventure. For example, you can find a wide-open space and fly a kite or go birdwatching and look at an actual kite — a Mississippi kite, that is. Adventure awaits. The only thing missing is you. Get out there. What will you discover?

📷 by **Noppadol Paothong**

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